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Semiannual Status Report

for

GLOBAL AURORAL IMAGING - DYNAMICS EXPLORER MISSION

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L. A. Frank
Principal Investigator

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Department of Physics and Astronomy
The University of Iowa
Iowa City, Iowa 52242-1479

1. Progress During Reporting Period

A/B/C. Instrument Health/Operations/Data Transmissions to Iowa

No spacecraft operations or GSFC decommutation took place in the reporting interval.

D. Image Processing at Iowa

100% of image processing has been completed for all imaging data at Iowa which is processible.

E. Data Archives

Archival work in progress at last report:

Iowa archiving of DESAI images past the 87/035 GFSC archival period is completed.

Copying of all DE1 telemetry data for 81266 through 91049 from platter to 4mm DAT is approximately 80% completed.

Archival work started since last reporting period:

Iowa archiving of nonproduction-sized DESAI images is 40% completed.

Future archival projects:

Condense the DESAI decom data from 9-track data tapes to 8mm data cartridges.

Create a set of images of survey data plots in a standard graphics format and save to 8mm tape.

2. DESAI Data Requests

Cheryl Huang (University of Iowa) requested some contour analyses, slides and color hard-copy of some DESAI image data and presented that data at the Spring 1994 AGU Meeting.

Marc Hairston (University of Texas - Dallas), who works with Rod Heelis, has requested DESAI image documentation and some images via electronic transfer for his investigations of our data on Sun-aligned arcs and Theta Aurora concurrent with DMSP passes.

More DESAI data were made available for the ongoing research at the Naval Research Labs under the direction of Bob Meier. A researcher there, Andy Nicholas, has been looking at both the VUV and Visible wavelength eclipse data. This researcher just recently obtained his MS from University of Alaska under John Craven.

Linnea Nooden, a graduate student from the University of Michigan working with Bob Clauer has requested images, coordinate data, and assistance with our image files.

Ata Etemadi (Space and Atmospheric Physics Group, Imperial College, UK), has some students working on DESAI images for contour analysis. He also has set up an electronic access World-Wide-Web (WWW) site to demonstrate his student's analyses and has asked to include a link to our SAI database on our VMS cluster. That permission is still pending.

DESAI data provided to G. Randall Gladstone, SRI, resulted in the following publication: Simulations of DE1 UV Airglow Images, J. Geophys. Res., **99**, A6, 11441-11448, 1994.

3. Publications

Meier, R. R., R. Cox, D. J. Strickland, J. D. Craven and L. A. Frank, Interpretation of Dynamics Explorer Far UV Images of the Quiet Time Thermosphere, submitted to J. Geophys. Res., 1994.

Weimer, D. R., J. D. Craven, L. A. Frank, W. B. Hanson, N. C. Maynard R. A. Hoffman and J. A. Slavin, Satellite Measurements Through the Center of a Substorm Surge, accepted for publication, J. Geophys. Res., 1994.

Craven, J. D., A. C. Nicholas, L. A. Frank and D. J. Strickland. Variations in FUV Dayglow Brightness Following Intense Auroral Activity, submitted to Geophys. Res. Lett., 1994.

Yahnin, A., M. V. Malkov, V. A. Sergeev, R. J. Pellinen, O. Aulamo, S. Vennerström, E. Friis-Christensen, K. Lassen, C. Danielsen, J. D. Craven, C. Deehr and L. A. Frank, Features of Steady Magnetospheric Convection, J. Geophys. Res., 99, 4039-4051, 1994.

Fujii, R., R. A. Hoffman, P. C. Anderson, J. D. Craven, M. Sugiura, L. A. Frank and N. C. Maynard, Electrodynamical Parameters in the Nighttime Sector During Auroral Substorms, J. Geophys. Res., 99, 6093-6112, 1994.

4. Presentations

Meier, R. R., R. Cox, D. J. Strickland, J. D. Craven and L. A. Frank, Interpretation of Dynamics Explorer Far UV Images of the Quiet Time Thermosphere, EOS, 75(16), 250, 1994.

Immel, T. J., J. D. Craven and L. A. Frank, Variations in the Column Density of Thermospheric O Within the Polar Caps, EOS, 75(16), 250, 1994.

Craven, J. D. and L. A. Frank, Asymmetric Expansion of the Auroral Bulge in Substorms, EOS, 75(16), 307, 1994.

Huang, C. Y., J. D. Craven, L. A. Frank and R. L. Dyson, Simultaneous Observations of Substorm Onset, EOS, 75(16), 308, 1994.

Hembroff, D. W., J. D. Craven and L. A. Frank, The Instantaneous Global Pattern of Auroral Electron Precipitation for AE < 100 nT, EOS, 75(16), 315, 1994.